LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-47 (previously canceled)

48-61 (previously canceled)

62. (currently amended) An apparatus for optically coupling at least one surface-emitting laser to at least one edge-receiving optical device comprising:

(a) an optical bench substrate having a mounting surface in the x-y coordinate plane, the mounting surface having a plurality of alignment features comprising a pair of x-direction stops and a pair of y direction stops defined therein;

(b) an array comprising the at least one edge-receiving optical device, said array monolithically fabricated and mounted on the mounting surface of the optical bench substrate, wherein:

each of the at least one edge-receiving optical device has an input edge in the x-z coordinate plane, each said input edge being perpendicular to both the mounting surface and to the substrate of the at least one edge-receiving optical device, whereby each of the at least one edge-receiving optical device is adapted to receive light traveling in the y direction into its input edge; and

each of the at least one edge-receiving optical device is for conditioning light traveling in the y-direction and received at its input edge; and

(c) the at least one surface-emitting laser, said at least one surface-emitting laser having a primary epi surface from which laser radiation is emitted in a direction perpendicular to the primary epi surface, a mounting edge perpendicular to the primary epi surface, and an active region parallel to the primary epi surface and perpendicular to the direction in which the laser radiation is emitted, the at least one surface-emitting laser being mounted at its mounting edge on the mounting surface~~, and~~ in the plurality of

alignment features, with the pair of x direction stops bounding the mounting edge and for securing the at least one surface-emitting laser from movement in the x direction and the pair of y direction stops bounding the mounting edge and for securing the at least one surface-emitting laser from movement in the y direction, further wherein the plurality of alignment features are positioned on said mounting surface with respect to the at least one edge-receiving optical device, so that the primary epi surface of the at least one surface-emitting laser is in the x-z coordinate plane and the at least one surface-emitting laser, when activated, will emit laser radiation in the y direction and into the input edge of the at least one edge-receiving optical device, respectively, whereby the at ~~least one~~ least one surface-emitting laser is directly optically coupled to the at least one edge-receiving optical device, respectively.

63. (previously canceled)

64. (previously canceled)

65. (previously added) The apparatus of claim 62, wherein the at least one surface-emitting laser comprises an array of surface-emitting lasers and the at least one edge-receiving optical device comprises a corresponding array of edge-receiving optical devices having one edge-receiving optical device for each respective surface-emitting laser.

66. (previously added) The apparatus of claim 62, wherein the edge-receiving optical devices of the at least one edge-receiving optical device are edge-receiving optical modulators.

67. (previously added) The apparatus of claim 66, wherein each of the at least one edge-receiving optical device further comprises an edge-receiving optical amplifier positioned in the path of the output signal from said each edge-receiving optical modulator.

68. (previously added) The apparatus of claim 62, wherein the edge-receiving optical devices

of the at least one edge-receiving optical device are edge-receiving optical amplifiers.

69. (previously added) The apparatus of claim 62, wherein the edge-receiving optical devices of the at least one edge-receiving optical device are semiconductor optical amplifiers (SOAs).

70. (previously added) The apparatus of claim 62, wherein each of the at least one surface-emitting laser is a VCSEL.

71. (previously added) The apparatus of claim 62, wherein the optical bench substrate is a silicon optical bench.

72. (previously canceled)